

7 January 2019
To: ChE 312 Class
From: Professors Koretsky and Goulas
Subject: Homework #1

Below is the first homework assignment of the quarter. Please conform to the format described in the class syllabus. This assignment is due on 10 January 2019 at the start of the studio section for which you are registered. If you have any questions, feel free to see us or one of the other instructors during office hours or by appointment.

1. Read the following blog on “Saving Money.” <https://lifehacker.com/turn-your-heat-down-not-off-to-save-on-your-heating-b-1677734952>. The author suggests that it costs you more money in electricity bills if you turn off your heat when you leave home on a cold winter day. Please select one of the following responses. Write a justification of your answer based on scientific reasoning.

___ I agree; it saves money to leave the heat on.

___ I disagree; I should turn the heater off to save money.

___ It depends on how long I am away from home.

2. You have decided to have friends over for a pizza night and want to use the outdoor pizza oven, shown in the picture. You want to make sure you have enough fuel to cook 8 pizzas (14 inches each).
 - a. How much wood do you need?
 - b. If you decided on using charcoal instead of wood, how much charcoal would you need?

Describe fully your approach, including where you got your information and what assumptions you made. For reference, Dr. Goulas is 1.76 m tall.

